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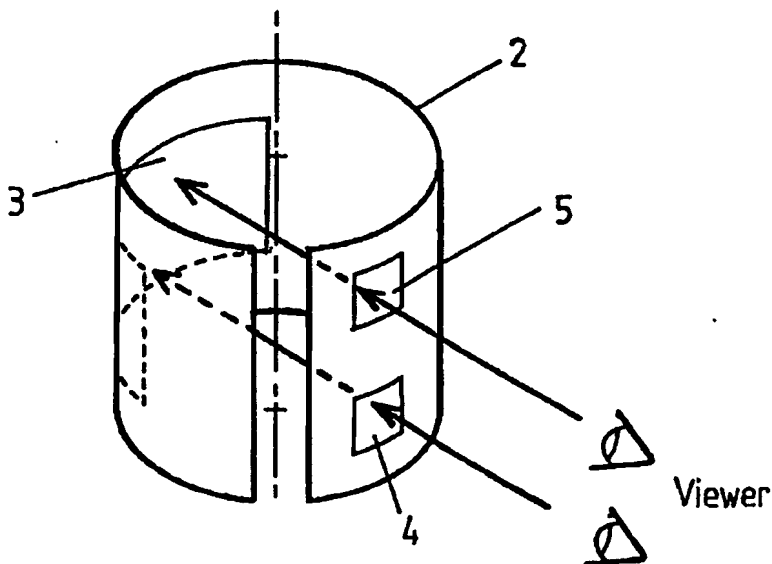
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(21) International Application Number: PCT/GB96/01661 (22) International Filing Date: 12 July 1996 (12.07.96) (30) Priority Data: 9514439.0 14 July 1995 (14.07.95) GB (71)(72) Applicant and Inventor: GLANCY, Peter [GB/GB]; 22 Coleherne Mews, London SW10 9 EA (GB). (74) Agent: MOLYNEAUX, Martyn, William; Langner Parry, 52- 54 High Holborn, London WC1V 6RR (GB).	(81) Designated States: AU, BG, BR, CA, CN, HU, JP, KR, MX, RU, TR, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>	

(54) Title: TRANSPARENT CONTAINER WITH ENCODED IMAGE



(57) Abstract

A translucent container (1) has an image bearing portion (3) located on a part of the container, the image being in a visually unreadable (incoherent) form, and a viewing window (4, 5) is located on an opposing part of the container for rendering the image in a visually readable (coherent) form when the contents of the container do not obscure the image. The image and windows may be formed on a label or may be formed directly onto the container by, for example, printing. Numerous methods are disclosed for rendering the image incoherent and for enabling the image to be rendered coherent.

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Transparent container with encoded image

This invention relates to a container and, particularly, to a translucent container at least a portion of which is translucent. The term "translucent" used
5 herein includes containers which are transparent or have a portion which is transparent.

Clear or tinted glass and plastic containers normally have labels or printed pigments affixed to their external surfaces in order to convey relevant manufacturer, brand
10 and contents information. For promotional purposes, additional labelling or artwork may be used.

Promotional opportunities where extra novelty or eye appeal is to be conveyed or where, for example, there is an "instant win" opportunity, requires traditional forms of
15 concealment for security reasons which may be, for example, rub-off coatings, a factory sealed element, or security tape.

The present invention seeks to provide a creative sales, value added or promotional element to a container
20 with labelled or over-printed surfaces. The invention also provides a secure manner of concealing a prize game which cannot be read or tampered with without revealing an intrusion or violation of the container.

According to one aspect of this invention there is
25 provided a container having at least a portion which is translucent, an image bearing portion located on part of said translucent portion, said image being in a visually unreadable form, and viewing means located on another part of said translucent portion and arranged to render said
30 image in a visually readable form.

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Preferably, said image bearing portion and said viewing means are located on different parts of a label adapted to be affixed to said container.

Preferably, said viewing means is, in use, on an
5 opposite side of said container from said image bearing portion.

Alternatively, said image bearing portion and said viewing means are formed directly on said container, for example using printing techniques.

10 Preferably said image is visually incoherent or encoded and said viewing means includes means for rendering said image coherently or in a decoded form.

Advantageously, said image is an autostereogram and said viewing means comprise one or more clear windows
15 through which said autostereogram may be read, or said image is a 3-D anaglyph and said viewing means comprises one or more tinted windows through which said 3-D anaglyph may be read, or said image is a lenticular lens and said viewing means comprise one or more windows through which
20 said lenticular lens may be read, or said image is a 3-D lenticular and said viewing means comprise one or more windows through which said 3-D lenticular may be read, or said image is a moving 3-D lenticular and said viewing means comprise one or more windows through which said
25 moving 3-D lenticular may be read, or said image is a random dot hidden image and said viewing means comprise one or more tinted windows through which said random dot hidden image may be read, or said image may be a foil hologram and said image viewing means comprise one or more tinted
30 windows through which said foil hologram may be read, or said image may be a polarised image and said viewing means comprise one or more tinted polarised windows through which

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said polarised image may be read, or said image may be a heat sensitive paint/ink/varnish image - in which event the image is heated by, for example, body temperature, to render the image coherent and the image is then read
5 through a clear window(s) or the image may be any of the preceding in which event it will be read as indicated above. The said image may initially be obscured by heat sensitive ink or paint.

Advantageously, the image includes written text and/or
10 graphics.

According to a feature of this invention there is provided a method of reading the image on said container wherein the container initially contains contents obliterating said image, said method including the steps of
15 emptying the contents until said message can be viewed and viewing said message through said viewing means.

Conveniently, said contents of said container are fluids.

The present invention utilizes the opacity of the
20 container's contents to block or conceal an image and includes a distortion or scrambling of the image that is only viewable when the contents are removed and the image is viewed through a special window in the side of the container.

25 The invention may enable creative sales, value added or promotional features to be added to a translucent container with labelled or over-printed surfaces or window box or blister carded product, thereby permitting two-dimensional and stereoscopic images to be viewed, for
30 example. The invention also provides a secure method of concealing a prize game which cannot be read or tampered

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with without revealing an intrusion or violation of the container. The invention also presents a means of utilizing normally redundant waste container for longer term use and fun. The invention also provides a manner of
5 visually conveying instructive data on medical, food, automotive, gardening and D.I.Y. products.

The invention will now be described, by way of example, with reference to the accompanying Figures, in which:

10 Figure 1 shows a translucent container with a wrap-around label,

Figure 2 shows the label in developed plan-form, and

Figure 3 shows the label of Figure 2 in an in-use, arcuate, form.

15 In the Figures like reference numerals denote like parts.

The translucent container 1, shown in Figure 1, has a circular cross-section and wrapped around the circumference of the container is a label 2 which partially extends along
20 the axial length of the container 1.

The label, shown particularly in Figures 2 and 3, carries an image 3 to be viewed on the internal surfaces of the container 1 when looking through a pair of windows 4, 5 which, in assembled form, are on an opposing side of the
25 container to the image 3. An end of the label has an adhesive strip portion 6 for securing the label to the container.

Although, as shown in the above Figures there are two

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windows, it is envisaged that in some variants only one window or more than two windows may be used. Further, it is envisaged that, instead of using a label, the image may be printed onto the container and the window or windows may simply be an opposing portion of the container wall. In this respect, the windows may be cut outs or unprinted areas on the container.

To prevent the image from being properly read i.e. making the image incoherent from the outside when there is nothing obliterating the image in the container, the image is advantageously encoded or scrambled by adopting one of the following:

- (a) Autostereogram - in which event the image is viewed from one or more clear windows.
- 15 (b) 3-D anaglyph - in which event the image is viewed through one or more tinted windows.
- (c) Lenticular lens - in which event the image is viewed through one or more windows.
- (d) 3-D lenticular - in which event the image is viewed through one or more windows.
- 20 (e) Moving 3-D lenticular - in which event the image is viewed through one or more windows.
- (f) Random dot hidden image - in which event the image is read through one or more tinted windows.
- 25 (g) Foil hologram - in which event the image is read through one or more tinted windows.
- (h) Polarised image - in which event the image is read through one or more tinted polarised windows.
- 30 (i) Heat sensitive paint/ink/varnish image - in which event the image is heated by, for example, body temperature, to render the image coherent and the image is then read through a clear window(s) or the image may be any of (a) - (h) in which event it will be read as indicated above.

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Each of the above forms of rendering an image incoherent and making it coherent by viewing means are known per se.

The image may include written text and/or graphics.

- 5 The image is such that it can normally only be read when the contents of the container which, when the container is full will obliterate the image, are emptied to such an extent that the image is viewable through the window on the opposing side of the container. The
10 container contents may be fluid.

- In another embodiment the container is opaque and a portion of the container wall is clear, for example by providing a window box such that a user may view the image on the opposing wall of the container through the window
15 box. In a further embodiment, instead of using a window box, or boxes, the container may be a blister carded package, i.e. a container which is formed by a backing card against which an article is located and the article is held to the card by a plastics film, whereby the article sits in
20 a bubble in the plastic film. It is, thus, to be understood that the term "container" used herein includes the use of packaging in general.

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CLAIMS

1. A container having at least a portion which is translucent, an image bearing portion located on part of said translucent portion, said image being in a visually unreadable form, and viewing means located on another part of said translucent portion and arranged to render said image in a visually readable form.
2. A container as claimed in claim 1 wherein said image bearing portion and said viewing means are located on different parts of a label adapted to be affixed to said container.
3. A container as claimed in claim 1 or 2 wherein said viewing means is, in use, on an opposite side of said container from said image bearing portion.
4. A container as claimed in claim 1 wherein said image bearing portion and said viewing means are formed directly on said container, for example using printing techniques.
5. A container as claimed in any preceding claim wherein said image is visually incoherent or encoded and said viewing means includes means for rendering said image coherently or in a decoded form.
6. A container as claimed in any preceding claims wherein said image is an autostereogram and said viewing means comprise one or more clear windows through which said autostereogram may be read, or said image is a 3-D anaglyph and said viewing means comprises one or more tinted windows through which said 3-D anaglyph may be read, or said image is a lenticular lens and said viewing means comprise one or more windows through which said lenticular lens may be read, or said image is a 3-D lenticular and said viewing

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means comprise one or more windows through which said 3-D lenticular may be read, or said image is a moving 3-D lenticular and said viewing means comprise one or more windows through which said moving 3-D lenticular may be
5 read, or said image is a random dot hidden image and said viewing means comprise one or more tinted windows through which said random dot hidden image may be read, or said image may be a foil hologram and said image viewing means
10 comprise one or more tinted windows through which said foil hologram may be read, or said image may be a polarised image and said viewing means comprise one or more tinted polarised windows through which said polarised image may be read, or said image may be a heat sensitive
15 paint/ink/varnish image in which event the image is heated by, for example, body temperature, to render the image coherent and the image is then read through a clear window(s) or the image may be any of the preceding in which event it will be read as indicated aforesaid.

7. A container as claimed in any preceding claim wherein
20 said image may initially be obscured by heat sensitive ink or paint.

8. A container as claimed in any preceding claim wherein the image includes written text and/or graphics.

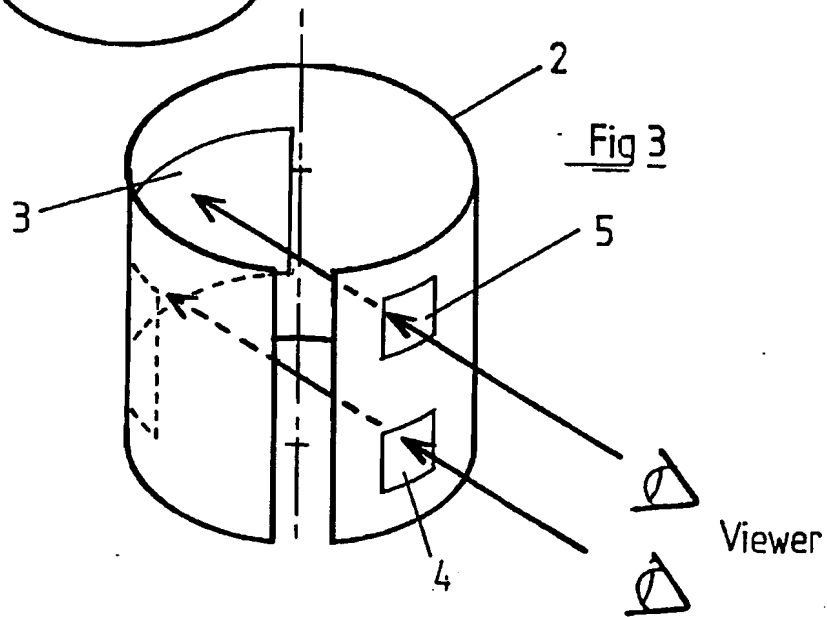
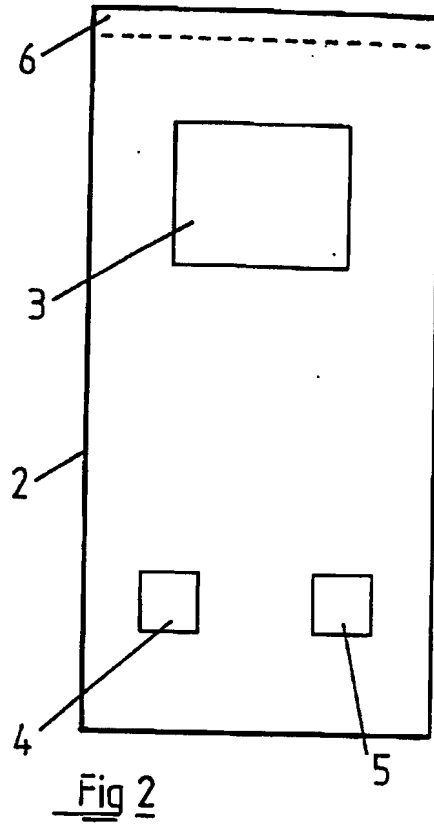
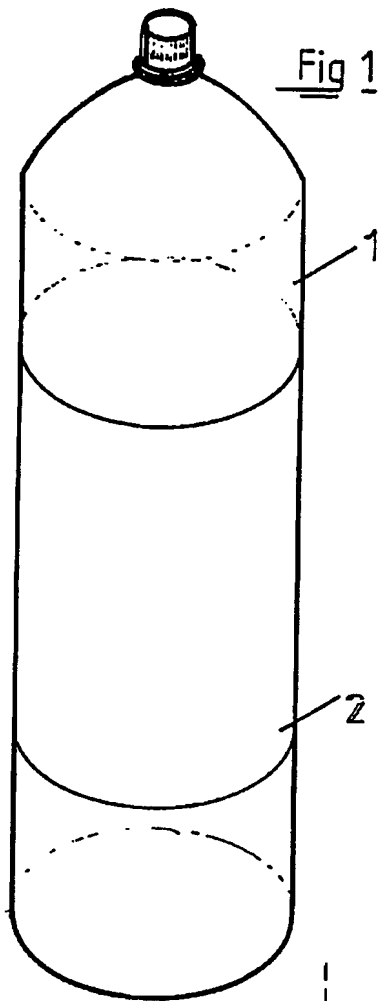
9. A container as claimed in any preceding claim wherein
25 a method of reading the image on said container wherein the container initially contains contents obliterating said image, said method including the steps of emptying the contents until said message can be viewed and viewing said message through said viewing means.

30 10. A method as claimed in claim 8 wherein said contents of said container are fluids.

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11. A container having at least a portion which is translucent, an image bearing portion located on part of said container, said image being in a visually encoded form, and viewing means located on another part of said container which includes said portion, said viewing means including decoder means for rendering said image visually meaningful.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 96/01661

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	FR,A,2 176 422 (TIMM) 26 October 1973 see page 1, line 1 - page 1, line 16 see page 5, line 1 - page 6, line 7 ---	7
A	DE,U,91 03 786 (W. VOIGTS) 29 May 1991 see page 4, line 19 - page 4, line 30 see page 6, line 16 - page 7, line 21 see claim 3 see figures 4,7 -----	1,6,11

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 96/01661

A. CLASSIFICATION OF SUBJECT MATTER IPC 6 B65D25/54 G09F3/02 G02B27/22		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 6 B65D G09F G02B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR,A,1 423 066 (J. CAUVIS) 18 March 1966 see column 1, line 9 - column 1, line 36 see figure 2	1-3,5,6, 8,10,11
Y	---	4,7,9.
Y	GB,A,2 192 082 (SEAGRAM UNITED KINGDOM LIMITED) 31 December 1987 see page 1, line 59 - page 1, line 118 see figure 2	4
A	---	1-3,8, 10,11
Y	US,A,4 558 528 (CUNNINGHAM WILLIAM D) 17 December 1985 see column 2, line 31 - column 2, line 38 see figure 1	9
A	---	1,5,6,11
-/-		
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A-1423066	18-03-66	NONE	
GB-A-2192082	31-12-87	NONE	
US-A-4558528	17-12-85	NONE	
FR-A-2176422	26-10-73	DE-A- 2212341	27-09-73
DE-U-9103786	29-05-91	NONE	